



**Advisory Announcement**  
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**CONTACT: Eric Coonradt**  
**Sitka Area Management Biologist**  
**(907) 747-6688**

## **SITKA SOUND HERRING FISHERY ANNOUNCEMENT**

Sitka. . . The Alaska Department of Fish and Game announced today the guideline harvest level (GHL) for the 2020 Sitka Sound sac roe herring fishery is **25,824 tons** of mature herring. The 2020 GHL was calculated by reducing the Age Structure Analysis (ASA) derived GHL by 39%, which approximates the harvest level available if the number of age-4 fish is half of that projected. This precautionary approach takes into account the higher than usual uncertainty in the size of the return of the age-4 herring.

The size of the forecasted 2020 age-4 herring cohort is extremely high and has more uncertainty due to its dependence on the number of age-3 fish estimated by the model in 2019, maturity rate, and estimates of survival for this unprecedented large age class. Because the department has had only one opportunity to observe this year class as age-3 herring, precaution is being taken for setting the GHL for the 2020 season.

The 2020 forecast is larger than the estimated 2019 mature biomass of 130,738 tons and is greater than any forecast previously estimated for Sitka Sound herring. The 2020 ASA forecast of mature herring biomass is 212,330 tons of mature herring. Large proportions of age-3 fish were also observed throughout other herring populations in the Gulf of Alaska in 2019.

The forecast indicates that the mature population by number of herring in 2020 will consist of 2% age-3, 83% age-4, 7% age-5, 4% age-6, <1% age-7, and 4% age-8+. Because there was no commercial harvest in 2019, the 2020 forecast used an average of the spring commercial purse seine weights at age from the 2017 and 2018 fisheries harvest: age-3, 79 grams; age-4, 92 grams; age-5, 109 grams; age-6, 126 grams; age-7, 144 grams; and age-8+, 165 grams. The forecasted average weight across all age classes is 88 grams.

To forecast biomass, the department uses an ASA model with a long time series of egg abundance and age composition data from department surveys conducted during and following the spring fishery. Herring egg abundance is estimated using aerial surveys, designed to map the length of shoreline receiving spawn, and dive surveys, which are used to estimate the density of eggs and average width of the spawn. The department mapped 55.8 nautical miles (nmi) of herring spawn in the Sitka Sound area during the spring of 2019, compared to the recent 10-year average of 63.7 nmi. Egg deposition observed during dive surveys in 2019 was very high (6<sup>th</sup> highest recorded since 1976), particularly along the southern shore of Kruzof Island. Estimated age composition by number of spawning herring in 2019 was 76% age-3, 8% age-4, 6% age-5, 1% age-6, 8% age-7, and <1% age-8+.

Advisory Announcement web site: <http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main>.

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